

FOLIO

The Senate

A part of the Senate's past was successfully revived on 28 and 29 September when the sixty-two member body conducted its initial meeting of 1979-80 in St. Paul, Alberta. It was the first time since 1973 that a Senate meeting was held outside Edmonton.

Fifty Senators, including all twenty new appointees, travelled to St. Paul by charter coach on the morning of 28 September. Upon arriving in this agricultural community of 4,500, they attended a luncheon at which Jim Horsman, Minister of Alberta Advanced Education and Manpower, revealed that the provincial government will be allocating some \$4.5 million to various Alberta institutions in recognition of the special needs of handicapped persons. The funding, he said, would be extracted from the 1980-81 budget and would continue for five years. The annual operation costs will total \$800,000 and annual capital costs \$100,000.

Mr. Horsman said the funding will be directed toward these areas: the special education required for teachers of handicapped children in the basic school system; the training and education of workers and professionals involved in rehabilitation services for the handicapped; and long-term and ongoing vocational training for adults with mental, physical and sensory handicaps and with learning disabilities. Mr. Horsman added that program planning would start immediately. He also commended Senate for its task force's relatively recent report "Children and Others With Learning Disabilities" and noted



The Mayor of St. Paul, John Bagan, welcoming the Senate. (Left to right): the Hon. J.D. Horsman, Chancellor Forest, His Worship the Mayor, Mrs. Bagan, Dr. Charles Anderson MLA St. Paul.

that a recommendation contained therein regarding the establishment of a centre for the study of learning disabilities at The University of Alberta is currently being reviewed.

It is Mr. Horsman's belief that the Senate can be a nerve centre between the University, the government and the public. In challenging the Senate to keep all channels of communication open he said that the Senate should "not become solely the voice of the University to Alberta but remain the voice of Alberta to the University."

In addition to the Minister, the head table consisted of Dr. Charles Anderson, MLA for

St. Paul; Mayor John Bagan and Mrs. Bagan; Chancellor Forest; and President Horowitz.

The remainder of the afternoon was taken up by a closed workshop and orientation seminar conducted by Hayden Roberts of the Faculty of Extension. In the evening, Senate divided into small groups for a round of discussions and then met and spoke with members of the St. Paul Chamber of Commerce and St. Paul Regional School Board at a wine and cheese reception.

The public meeting began at 9 a.m. on 29 September with reports by the Chancellor, President, and Executive Officer of Senate. Dr. Horowitz said that a

major concern of his office is long-range planning and review of programs and units in relation to that.

It was announced that Ray Killeen was elected to the Senate to replace G.A. Fullerton who was recently transferred to Winnipeg by his company. Mr. Killeen resides in Edmonton and works for AGT as staff engineering supervisor, central equipment methods.

The Senate's Honorary Degrees Committee selected Dr. Herbert T. Coutts, former Dean of the Faculty of Education, as the recipient of an Honorary Doctor of Laws degree. The degree will be conferred on Dr. Coutts at Fall

Convocation on 17 November.

Following a review of the current activities of Project Morning Star by Project Director Leroy Sloan, the Senate considered a letter by member Harlan Hulleman regarding the possibility of submitting a brief to the Minister's Representative, Dr. Gordon Mowat, on the question of reinstituting compulsory grade 12 examinations. The issue is now before the Minister's Advisory Committee on Student Achievement (MACOSA). As Senate felt that there was insufficient time at the meeting to discuss the matter and as Senate has no jurisdiction in academic areas, a decision was made which will see Senate recommend to MACOSA that the government study and consider alternatives to the return to mandatory departmental examinations. The recommendation would take the form of a suggested course of action. The deadline for submissions to MACOSA is 15 October and the committee will report to Education Minister King early in December.

FOLIO

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All inquiries and correspondence should be directed to:

Folio
Office of Community Relations
423 Athabasca Hall
University of Alberta
Edmonton, Alberta T6G 2E8
Telephone: (403) 432-2325

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Senate member and Chairman of Romance Languages Jo Ann Creore pointed out that the Council of Department Chairmen is drafting a brief which will urge the consideration of all alternatives to departmentals.

In January of 1978, General Faculties Council approved the following motion: "That the University continue to use high school grades as a basis for admission and not take steps at the present time to develop and administer its own university-wide entrance examinations in the various Grade XII matriculation subjects."

In another matter, concerning proposed establishment of a task force to examine the goals and purposes of the University and the public's perceptions of the University, Senate voted to have its executive committee investigate and submit a report at the 15 November Senate meeting with a specific proposal.

Three briefs written by St. Paul residents were also presented to Senate. The first, by Dr. R.E. Hibbard, decried the shortage of medical services and manpower in the rural areas of northeastern Alberta. "Our pessimism is aggravated by a lack of cooperation and support from the Faculty of Medicine and the teaching hospitals in Edmonton," Dr. Hibbard said. His brief recommended that funds and resources be earmarked for increased training of general practitioners in northern Alberta and that rural settings be used as part of the training of family practise residents.

Rural practise, the brief said, should be given a greater emphasis in undergraduate curriculum and the selection process of the Faculty of Medicine should be studied and altered so that some students could be admitted on the basis of aptitude for rural practise as well as on the basis of academic performance.

A brief, presented on behalf of registered nurses in St. Paul, called for an increase in the number of nursing courses in the community, a request which Dean Amy Zelmer fully supports.

Funding, however, is another matter. Senate's support of the brief will be communicated to the government by the Chancellor.

The final brief favored the establishment of a centrally located junior college in the St. Paul region. Qualifications of the college would need to include accreditation such that course credits would be accepted by and transferable to Faculties of the University. The brief, presented by Sid Holthe, Chairman of the Elk Point Further Education Council, invited the Senate to "consider directing some special

attention to this region both in terms of lowered minimum enrolment numbers for courses as well as in providing more courses reflecting needs of professionals of the communities."

The meeting concluded with a detailed presentation on the Faculty of Dentistry by Dean Gordon Thompson and two students enrolled in Dentistry and Dental Hygiene respectively.

In the coming months the Senate will fully evaluate the possibility of developing the concept of holding one meeting per year outside Edmonton. □

research reporter

The research reporter, primarily designed to attract the interest of persons in the commercial communications media, is included in Folio on a monthly basis because of the interest shown by the University community in its brief reports. Short descriptions of research—any kind of research—should be sent to Research Reporter, Office of Community Relations, 423 Athabasca Hall. All reports are checked with those concerned prior to being printed.

Fossils bear witness to early North American history
Old Crow. Hardly a prepossessing name, yet it is one which promises to become prominent when the history of life on this continent is discussed.

Old Crow, located on the bank of the Porcupine River in the Yukon Territory, has something going for it which more than makes up for its humble name: when an icecap last covered North America, the Old Crow area remained ice-free. Because it did, it now has a story to tell, a chronicle which in other areas of the continent was obliterated or confused by the massive sheets of ice.

One of the scientists involved in translating the tale beneath the earth's surface at Old Crow is Dr. N.W. Rutter, a University of Alberta geologist. He is one of five principal investigators working at the site. One of the others also comes from The University of Alberta, one is from the National Museum in Ottawa, and two are from the Geological Survey of Canada.

The investigators are excited by what Old Crow offers: a relatively complete Pleistocene record of lake and river deposits that may be as old as one million years; the fossilized remains of mollusks, mammals, and the abundant wood; and, closer to the surface, are what could be artifacts which would push back the history of man on this continent.

Dr. Rutter's contribution is largely in the area of dating material. He does this using the amino acid method, and, because this method is still in its infancy, much of his work is of a pioneering nature.

Dr. Rutter says that the method has two main recommendations: it can be used for dating material beyond the about 45,000-year span for which radiocarbon dating is useful, and only very small samples are needed. He further explains that while there are proven methods of dating effective beyond the radiocarbon range—methods described by phrases such as fission-track and potassium-argon disequilibrium—these

methods require special circumstances not found in the majority of deposits which, like Old Crow, are of the Pleistocene age.

The method which Dr. Rutter is using is based on an interesting phenomenon related to amino acids, which are present as building blocks of protein and as structural components in all living organisms. With the sole exception of glycine, all of the many amino acids which are incorporated into the protein molecules of living organisms can exist in two forms; scientists differentiate the two by the symbols "D" and "L". Only "L" amino acids are present in the protein molecules of organisms. However, once an organism ceases to live, the "L" amino acids begin a very slow change in configuration, eventually becoming "D" amino acids.

Because this conversion takes place at a rate which is dependent on time, the extent to which this process is complete is an indicator of age. At one end of the scale are organisms which have just died—a ratio of "D" to "L" amino acids of zero—and at the other end are organisms which ceased to live at about the time of the Miocene period, roughly 28 million years ago, and now have an equal amount of "D" and "L" amino acids—a ratio of one.

The method is not perfect, though, explains Dr. Rutter, as the rate of conversion is not dependent upon time alone; differences in temperature, among other things, can have dramatic effect. That is not a problem where the temperature history is known or can safely be assumed to have been constant, but at places like Old Crow this is not the case, making absolute dating difficult. In these circumstances an approach sometimes used involves comparing the results of amino acid dating with radiocarbon dating as far back as the latter method is useful, giving some idea of the temperature régime.

Absolute dating, however, is not always the only concern. Important to the work being done at Old Crow is relative dating—putting the story into proper sequence—and, for this, amino acid dating works very well. And



Dr. Rutter explains that the abundant wood deposits in the far north are ideal for amino acid dating.

it is such a versatile method as it can be applied to a variety of fossil material.

Dr. Rutter says that originally most amino acid dating was done on marine shells and bones. At Old Crow he is concentrating on wood and on terrestrial shells, due to serious reservations which he has regarding the use of bone. His group is the only one in North America specializing in wood, but he is convinced that wood, having the advantage of being a much simpler structure, is a much better medium than bone.

The dating of the Old Crow fossils is done at The University of Alberta from samples collected during the summer months. The actual dating process involves the use of a gas chromatograph, and at this stage Dr. Rutter turns to Dr. R. J. Crawford, acting chairman of the Department of Chemistry, who provides the specialized knowledge required for such analysis.

Dr. Rutter and his colleagues have just begun to bring the Old Crow story to light; when it is complete, we should have a better idea of the early history of North America.

Simple approach to solar heating examined

Interest in the conservation of the earth's energy resources has inspired a variety of approaches

to the conversion of the sun's energy to home heating. Probably the simplest is that which Dr. R. R. Gilpin is investigating: the use of south-facing windows.

The Professor of Mechanical Engineering says that the zeal with which the problem of home heating via solar energy has been attacked in recent years has led to some very sophisticated, high-technology approaches. The extent of the role which south-facing windows can play, however, has been largely left uninvestigated. Dr. Gilpin is one of the people who are now giving that due attention, and he has found that this simple approach can prove quite effective in lowering heating bills.

Dr. Gilpin says that by making fairly minimal changes to current construction practises—changes which might result in an increased construction cost of about \$3,000 to \$5,000—the cost of heating a home in the Edmonton area, could be cut to about one-third of present values. And even in a conventional house it is possible to realize savings from south-facing windows, says Dr. Gilpin. He warns, however, that there is a danger of producing excess heating of the house should the windows be too large.

Currently Dr. Gilpin, with funding assistance from Energy, Mines and Resources Canada, is trying to develop a systematic, analytical way of determining exact savings under varying conditions. From this would come guidelines for builders: the necessary ratio of south windows to floor area, the amount of window overhang necessary to prevent overheating, the thermal energy storage requirements, and so on.

Based on his work to date, Dr. Gilpin says that an energy saving of about two thirds can be accomplished by building a highly insulated home—with insulation values in the R20 to R30 range compared to the R10 or R12 now common—sealing it well, providing a masonry or similar wall in the interior for absorption and retention of heat, and ensuring sufficient south window area—perhaps 10 to 20

percent of the floor area. He adds that the carrying of this design to its extreme—super-insulated walls and a virtually unbroken vapor barrier, combined with sufficient thermal storage and south window area—could lead to a home with an additional energy requirement approaching zero.

Of course, fundamental to all this is a house site with southern exposure, and this has implications for future urban design. Dr. Gilpin notes that a town in Ontario has already been laid out so as to maximize southern exposure. And, he says, as an increasing number of people try to take advantage of the sun's rays for home heating, the right to sunlight is sure to become a common topic of legislative debate.

Professor finds arts institutions need management help

All too often, says Dr. R. Chaganti, one visits a non-profit arts institution, perhaps a dance company, a theatre group, or an art gallery, and finds a person sitting in the corner looking gloomy and out of place. Enquiries elicit the response "Oh him, he's the manager."

Dr. Chaganti certainly is not indicting all managers of non-profit visual or performing arts institutions, but The University of Alberta professor is firm on the point which he is illustrating: such institutions are generally very weak in the area of management expertise.

In recent years, says the Assistant Professor in the Faculty of Business Administration and Commerce, non-profit arts institutions have come under increased financial pressure as competition has increased and government grants have failed to keep up with rising costs. Not that the pressure is all bad, says Dr. Chaganti, giving examples of positive ramifications: the pressure has caused the institutions to seek independent sources of financing, which they may not have done otherwise, and to take a good look at their performance in the market place. This, he

says, has led to new ideas, increased promotion, a greater emphasis on determining what the public wants, and a wider appreciation of arts in the community.

Because of the pressure, however, management expertise is of even greater importance. But, typically, the manager of an arts institution comes to the position because of an expertise in his medium, not because of training or expertise in management, and that lack is evident, says Dr. Chaganti. He also points out that a great deal needs to be done in Canadian post-secondary educational institutions to give arts institutions the necessary management expertise.

The University of Alberta professor sees this problem as having particular implication for Edmonton and Alberta. In his view, the continuing development of the city and province requires that professional-type people be attracted; in this context, the quality of life as determined by the quality of the leisure activities available takes on added importance.

Dr. Chaganti is not just sitting back and criticizing. He is taking an active role in studying the management and marketing problems of visual and performing arts bodies. Because the individual institutions often cannot afford private consultants, he is involving the institutions in the studies where possible and where research and teaching needs are met. Currently, emphasis is on collecting the background data necessary for sound management decisions.

Recently Dr. Chaganti collaborated with graduate student Susan Toole on two research papers based on work done in cooperation with the Edmonton Art Gallery. The first summarizes findings relevant to the marketing of works of art. Examined were: the market segments, features of a work of art which "sells," benefits sought by purchasers, and the characteristics of retail outlets from which consumers are likely to buy. From facts gathered in examining market segments, Dr. Chaganti is confident that he can predict the buying habits of an individual

purchaser with about 70 percent accuracy once a few basic facts are known.

The subsequent research paper looked at the Gallery itself, addressing questions such as: What services do patrons value most? What benefits do people seek from visiting, becoming a member, or donating money to the Gallery? What size of a donation would an individual patron be willing to make to the Gallery *vis à vis* competing causes?

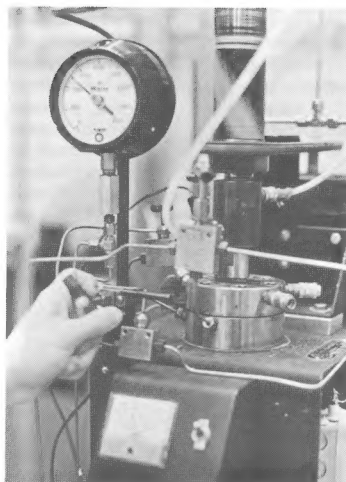
Also examined for the second paper was the pattern of overlap in patronage among various fine art activities in the market place. This was of special interest to Dr. Chaganti in view of a trend that is developing in cities in the United States: a consortium approach to fund raising, complete with "telethons" and the like. While this has some inherent drawbacks, discouraging as it does individual identity and the consequent close identification of some patrons with the individual entity, in centres like Cincinnati and Minneapolis it has shown its benefits, including superior solicitations and the possibility for intensive promotion.

Based on what he has learned about Edmonton Art Gallery patrons—for instance a good many of the Art Gallery patrons also support the Citadel Theatre—Dr. Chaganti believes that a united approach could quite possibly be of benefit to Edmonton's non-profit arts institutions. It is a possibility which he intends to give more attention in further research.

Professors investigate hydroprocessing of Alberta's hydrocarbon resources

At the very heart of the impressive looking equipment in the laboratory where Drs. Dalla Lana and Otto carry out their research is a stainless steel container not dissimilar in size and shape to a quart-size paint can except for the fact that its walls are more than an inch thick and an extended upper lip permits a cover of similar thickness to be securely bolted to it.

Amidst the other paraphernalia of the chemical engineering lab,



During the hydroprocessing operation temperatures and pressures soar to 475°C and 2,500 lbs./sq. in.

the container does not particularly stand out, and it comes as something of a surprise to learn that this is the pilot reactor which is central to the research being conducted by the two University of Alberta professors. The tiny reactor routinely accommodates temperatures of 475°C and pressures of 2,500 pounds per square inch as the researchers seek information relative to the processing of Alberta hydrocarbon energy resources.

Dr. Ivo Dalla Lana and Dr. Fred Otto, Chairman of the Department of Chemical Engineering, are interested in hydroprocessing, a means by which fossil fuels such as conventional oils, heavy oils, bitumen, and coal are converted to lighter and more useable products such as diesel fuel and gasoline.

All of these fossil fuels are hydrocarbons—that is they consist of carbon and hydrogen atoms linked together in some combination, the different combinations resulting in the different characteristics. Hydroprocessing essentially involves adding additional hydrogen atoms; extreme heat, pressure, or a chemical catalyst encourages the original hydrocarbon to break down in the presence of the additional hydrogen atoms and, when bonds reform, the result is lighter and more fluid hydrocarbons. This process is often referred to as

hydrocracking. Hydroprocessing also provides the means to remove undesirable foreign atoms such as sulphur, nitrogen and oxygen, and this is commonly known as hydrotreating.

Although hydroprocessing technology is well advanced for feedstocks based upon conventional crude oils, much of it is proprietary and thus closely guarded by the various oil companies. Further, it has become apparent that technology used for conventional crude is not entirely applicable to feedstocks based upon less conventional sources. Each, it seems, reacts differently to hydroprocessing; heavy oil from Lloydminster even reacts differently than does that from Cold Lake.

It is the desire of these chemical engineering professors to establish at The University of Alberta expertise in the hydroprocessing field and to introduce into the public domain some of the missing technology; emphasis is on feedstocks from Alberta. Hand in hand with the research is meaningful education: the graduate students and research assistants involved in the work are gaining knowledge of value to future commercial employers. Of that the professors have already been given evidence—one of their top assistants has recently departed for a position in the oil industry.

Currently, Drs. Dalla Lana and Otto are using the pilot reactor for investigation of a gas oil supplied to them by the CANMET Energy Research Laboratory in Ottawa. This particular gas oil is a product of the process being developed by Energy, Mines and Resources Canada for the thermal hydrocracking of Athabasca bitumen.

Support for the research program comes from Energy, Mines and Resources through their research agreements program, from National Research Council grants to both professors, from the University's Hydrocarbon Research Centre, and from a National Research Council scholarship awarded to P.K. Man, a graduate student assisting in the research. □

Pat Austin Memorial Fund

On 10 December 1978, Dr. Patricia Louise Austin, outstanding teacher, wise professor, inquisitive researcher and caring human, passed away after a prolonged illness. Pat will be long remembered for her contributions in the areas of physical education, women's athletics, recreation and community service and more recently for her committed work in physical activity research and program development for young mentally retarded children.

In memory of Pat, a memorial fund has been created. The Pat Austin Memorial Fund will be invested in the University of Alberta's Endowment Pool. The interest from the Fund will be used to ensure the continuing

Research and Demonstration Center for young mentally retarded children, which was conceived by Pat in 1972 and to which she devoted the majority of her professional energies during her later professional life.

Contributions in the form of personal cheques or money orders should be forwarded to:

The Pat Austin Memorial Fund,
c/o The Office of the Dean,
Faculty of Physical Education
and Recreation,
The University of Alberta,
Edmonton, Alberta
Canada T6G 2H9

Official receipts will be provided for income tax purposes to all contributors. □

German Cinema of the '70s

16 October. 7:30 p.m. "Nordsee ist Mordsee" ("North Sea, Murder Sea"). Centennial Library Theatre. Free admission.

Edmonton Public Library

13 and 14 October. 2 p.m. "The Quiet Man," starring John Wayne. Centennial Library Theatre. Free admission.

Edmonton Film Society

15 October. 8 p.m. "Pat and Mike," starring Katharine Hepburn and Spencer Tracy. Tory Lecture Theatre.

SUB Theatre

14 October. 7 and 9:30 p.m. "Top Hat," starring Fred Astaire and Ginger Rogers.
17 October. 7 and 9:30 p.m. "The Day of the Jackal." Tickets available at the door.

Music

Department of Music

12 October. 8 p.m. The organ-master Dr. Jacobus Kloppers. Convocation Hall.

15 October. 8 p.m. Decade 2 Series with the University of Alberta Quartet. Convocation Hall.

16 October. 8 p.m. "Music from Banff" (piano and strings). Convocation Hall.

17 October. 8 p.m. The piano of Riccardo Camarella. Convocation Hall.

Admission charge to all performances. Tickets available from Music department. Telephone 432-3263.

The South Side Folk Club

13 October, Saturday. Concert featuring Sweetgrass from Red Deer and Paddy Tutty from Saskatoon. Tickets at Keen Kraft Music 10204 107 Ave. and Scottish Imports 10846 82 Ave. Club information 475-1042, 475-2260.

Barbershop Harmony Singers

15 October. 7:15 p.m. This all male chorus will hold a "Get Acquainted" meeting for interested campus singers. Westmount Junior High School, 11125 131 Street. Telephone 432-6561.

Exhibitions

University Art Gallery and Museum

Continuing. The University of Alberta Map Collection Exhibition, illustrating the changes in cartography from the 14th to 19th centuries.

Continuing. "Rodney Gladwell," a small exhibition of lithographs and gouaches from his works. Gallery hours: Weekdays 11 a.m. to 4 p.m. Thursday till 9 p.m. Sunday, 2 p.m. to 5 p.m.

Alberta Culture

Continuing. "Women Artists in Alberta." The exhibit consists of 29 works in a variety of mediums. Showing in the Beaver House Gallery.

SUB Gallery

Until 15 October. "Jim Davies and Doug Dunford." Works of two painting graduates.

Edmonton Art Gallery

Continuing. "Children by Children," works by children selected from province-wide entries.

Continuing. "Joseph Fafard," a survey of ceramic portrait sculpture by this Saskatchewan artist.

Continuing. "Jules Olitski—Paintings of the 1970's".

Continuing. "The Canadian Contemporary Photograph," the works of contributors to the photographic scene in Canada today.

Edmonton Art Club

14 October. Annual fall art exhibition on the lower floor of Jubilee Auditorium during regular auditorium hours.

Edmonton Public Library

Continuing. "19 photographs of 18 people." Photography Gallery at the Centennial Library.

Lectures and Seminars

The Women's Canadian Club

15 October. 12:15 p.m. Professor Peter Tacon, first president of Pueblito, Canada (1974-76) will speak on "The Abandoned Children of Costa Rica." Hotel Macdonald. Telephone 469-7961 for information.

Classics Department

18 October. 4 p.m. R.J. Buck et al. will speak on "The University of Alberta's excavation of a Roman Villa at San Giovanni di Ruoti, Italy—the third season (1979)." 1-8 Humanities Centre.

Canadian Institute of Ukrainian Studies

16 October. 12:30 p.m. Markian Kowaluk will speak on "The Literary Career of Mykola Rudenko." 352C Athabasca Hall.

Department of Physics

16 October. 3:30 p.m. Dr. M.E. Evans will speak on "The Earth's Magnetic Field, Past and Present." V128 Physics Building.

Guild for Mediaeval and Renaissance Studies

18 October. 8:15 p.m. Dr. S.P. Khetarpal of the Faculty of Law will speak on "Matrimonial Property: Ancient and Modern Law." L-3 Humanities Centre.

coming
events

Listings must reach the Editor by 9 a.m. on the Thursday prior to publication. Written notification is necessary. Listings should be sent to 423 Athabasca Hall.

Films

National Film Theatre

12 and 14 October. 7:30 and 9:20 p.m. "The Fantastic Animation Festival," a compilation of animated shorts. Showing in the Citadel's Zeidler Hall. Tickets \$2.75.

Provincial Museum

13 October. 2 p.m. Films on India, "The Village Economy," "The Village," and "Village Family."

14 October. 4 and 7 p.m. "The Informer."

17 October. 7 p.m. "The Night existence of the Physical Activity My Number Came Up." Free admission.

Boreal Institute for Northern Studies

16 October. 8 p.m. Mr. Gordon Howell of the Alberta Research Council's Solar and Wind Energy Research Program will speak on "Practical Solar Energy." CW-410 Biological Sciences Centre.

Department of Biochemistry

18 October. 4 p.m. Dr. I.C.P. Smith of the National Research Council in Ottawa will talk on "Recent Nuclear Magnetic Resonance Studies on Model and Biological Membranes." 227 Medical Sciences.

Sports

Soccer

13 October. 11 a.m.
University of Victoria.
16 October. 7 p.m.
North West United.

Hockey

19 October. Winnipeg.
20 October. Lakehead.
21 October. Manitoba.

Theatre

Studio Theatre

18 October. 8 p.m. "When You Comin' Back, Red Ryder?" Performances in Corbett Hall. Telephone 432-2495 for information

Catalyst Theatre Society

Continuing. 8 p.m. "On and Off the Street," an original play dealing with juvenile delinquency. Tickets available at Theatre Three, The Bay, HUB and Farlie Mohawk.

Citadel Theatre

Continuing. "Hamlet," starring Hollis McLaren.

Continuing. "Mister Lincoln" starring Roy Dotrice. Rice Theatre. Telephone 425-1820 for information.

Walterdale Theatre

Continuing. 8 p.m. "The Prime of Miss Jean Brodie."

Théâtre Français d'Edmonton

19 October. 8 p.m. "George

Dandin," by Molière. Performances in the auditorium of Faculté Saint-Jean. Telephone 469-0829 for information.

SUB Theatre

13 October. 7 and 9:30 p.m. "18 Wheels," a Tarragon Theatre production. Tickets \$5.

The Houselighters

18 October. The "Theatre and You" program will feature Frank Norris, Director of Drama Workshop and House Manager at the Citadel Theatre. Program at Citadel Theatre. Free admission. Telephone 439-4225 for information.

service information

Information must reach the Editor by 9 a.m. on the Thursday prior to publication. Written notification is necessary. Notices should be sent to 423 Athabasca Hall

Notices

Physical Fitness Programs

A variety of physical fitness classes are being offered by the Department of Athletic Services. Courses range from \$9.50 to \$39.50. For further information telephone Art Burgess at 432-5834.

GFC Executive Committee Vacancy

The GFC Nominating Committee is seeking nominations to fill the vacancy for one member of General Faculties Council to serve on the GFC Executive Committee.

Would those who have suggestions for nominations or who are interested in serving on the above Committee please contact the Secretary of the GFC Nominating Committee at 2-1 University Hall. Telephone 432-4715. It would be appreciated if a very brief vita could accompany any nomination.

Non-Credit Courses

PRIMER—Practical Introduction to Mental Retardation

The Centre for the Study of Mental Retardation will present a lecture/work-

shop introduction to mental retardation for parents, foster parents, group home workers, volunteer, novice, and non-professional personnel working with the retarded. The program reviews the causes, characteristics, and classification of mental retardation; the principles of normalization; the medical aspects of mental retardation; learning and development characteristics; behavior management techniques; programming for growth; and social-emotional-recreational development. In addition, a full-day tour will be made of two community facilities for the retarded.

Evening classes for PRIMER are scheduled for 23, 25, and 30 October, and 1, 6, 13, and 15 November. Saturday, 3 November, will be a full-day class and Tuesday, 13 November will be spent touring facilities.

The cost of the course is \$20 for individuals and \$30 for married couples. Registration forms and further information may be gained by telephoning 432-4439.

Faculty of Extension

Interpreting the Woods and Fields: The Grey Season

Date: 13 and 14 October. Deadline: 11 October. Fee: \$18. Telephone: 432-5044, 432-3116.

Leadership Techniques in

Short-term Group Therapy

Date: 30 October to 1 November. Class limit: 24. Fee: \$75. Telephone: 432-5069.

Introduction to Reality Therapy

Date: 22 to 24 October. Class limit: 24. Fee: \$80. Telephone: 432-5069.

Scholarships, Fellowships and Awards

S.S.H.R.C. Doctoral Fellowships

The Social Sciences and Humanities Research Council of Canada is offering fellowships valued at \$6,750 to \$7,420. The fellowships for doctoral level of study are offered to Canadian citizens or landed immigrants involved in the humanities or social sciences. The closing date for applications is 15 November 1979. For further information contact the Student Awards Office.

Commonwealth University

Interchange Scheme Travel Grants

Grants to enable university faculty to travel to Australia, Britain, or Hong Kong are now available from the CUIS. For information write to The Association of Commonwealth Universities, 36 Gordon Square, London, WC1H 0PF

Mental Retardation

The National Institute on Mental Retardation is offering awards to students registered in graduate studies

at a Canadian university and planning careers in mental retardation. Awards are valued from \$6,000 to \$1,000. For information write to Kinsmen NIMR Building, York University Campus, 4700 Keele Street, Downsview, Toronto, M3J 1P3.

Surplus Equipment

For further information about the purchase of equipment or the disposal of any of your department's surplus equipment, consult Bonnie O'Dwyer or Roy Bennett, telephone 432-3208.

One set MP4XLR Camera and accessories

For further information, telephone Dr. Nihei at 432-6287.

Positions Vacant

On-Campus

Dean, Faculté Saint-Jean

The Faculté Saint-Jean of The University of Alberta, invites the nomination of, or application from, candidates for the position of Dean, for a term commencing 1 July 1980. It is anticipated that the successful candidate will serve an initial term of at least six months as Associate Dean prior to his appointment as Dean. Both men and women are invited to apply.

The Faculté Saint-Jean is a multi-disciplinary Faculty of The University of Alberta providing an undergraduate education in a French-language environment. Enrollment encompasses some one hundred and eighty (FTE) students in the Bachelor of Arts, Bachelor of Education and Bachelor of Science programmes. The position of Dean entails responsibility for the administration of nineteen full-time members, plus sessional instructors.

Candidates should have appropriate academic qualifications, administrative experience in university or comparable situations, and strong leadership ability. Further, given the role of the Faculté Saint-Jean, candidates should be fluent in English and French and sensitive to the needs of the French-Canadian community.

Written nominations, or applications, accompanied by a *curriculum vitae*, should be forwarded to:

Dr. W.F. Allen,
Acting Vice-President (Academic),
The University of Alberta,
Edmonton, Alberta
T6G 2J9.

Research Assistant

Wanted: Part-time Research Assistant (\$500-\$750 month) for human experimental psychology laboratory. Knowledge of statistics and computer programming and previous laboratory experience highly desirable. Send résumé to A. Friedman, Biological Sciences Bldg. P-559, University of Alberta.

Non-Academic Positions

To obtain further information on the following positions, please contact Personnel Services and Staff Relations, third floor, SUB, telephone 432-5201. Please do not contact the department directly. Positions available as of 4 October.

Clerk Typist II (\$707-\$817)—Provincial Laboratory; University Health Services; Sociology; Surgical-Medical Research Institute
Clerk Steno II (\$707-\$844)—Mechanical Engineering; Secondary Education; Audiovisual Media Centre; Philosophy; Forest Science; Extension; Agricultural Engineering (Term)
Dental Assistant I (\$733-\$878)—Dental Clinical Sciences
Clerk Typist III (\$761-\$910)—Pharmacy
Clerk Typist III (Part time) (\$5.00/hour)—Student Affairs (Term, Trust)
Programmable Typewriter Operator I/II (\$761-\$985)—Personnel Services and Staff Relations
Clerk Steno III (\$785-\$945)—Psychology; Student Counselling Services; Business Administration and Commerce; Educational Psychology; Chemical Engineering; Recreation Administration; Continuing Medical Education; Civil Engineering; Obstetrics and Gynaecology; Provincial Laboratory; Physiology; University Occupational Health, Safety and Fire; Mineral Engineering (2 positions); Field Services (Term); Mechanical Engineering
Clerk Steno III (Trust) (\$818-\$985)—Legal Resource Centre
Data Entry Operator I/II (\$785-\$1,026)—Computing Services
Programmable Typewriter Operator II (\$817-\$985)—Civil Engineering
Student Record Processing Clerk (\$817-\$985)—Education—Students Record Office
Medical Steno (\$844-\$1,026)—Medicine; Surgery; Medicine (term)
Secretary (\$878-\$1,071)—Chemistry; Dentistry; Business Administration and Commerce; Microbiology
Administrative Clerk (\$910-\$1,115)—Genetics
Systems Control Clerk (\$910-\$1,115)—Office of the Comptroller
Senior Accounts Clerk (\$1,026-\$1,264)—Office of the Comptroller
Library Assistant III (Part time) (\$342-\$421)—Language Laboratories
Department Secretary (\$1,027-\$1,264)—Board of Governors; Medicine
Audio Visual Assistant (Part time)—(\$381-\$455)—Geography (Term)
Laboratory Assistant II (\$733-\$878)—Provincial Laboratory; Pharmacy and Pharmaceutical Sciences
Storeman I (\$761-\$910)—Printing
Computer Assistant II (\$817-\$985)—Computing Services
Maintenance Man I (\$844-\$1,026)—Housing and Food Services
Technical/Senior Technical Assistant (\$844-\$1,162)—Radio and Television
Storeman II (\$878-\$1,071)—Central Stores
Field Technician (\$910-\$1,115)—Genetics
Civil Engineering Technician I (\$910-\$1,115)—Civil Engineering
Technician I (\$910-\$1,115)—Entomology
Chemical Technician I (\$910-\$1,115)—Soil Science
Curriculum Technician I (\$910-\$1,115)—Audiovisual Media Centre
Research and Planning Analyst II (\$910-\$1,115)—Vice-President Planning and Development (Planning Office)
Computer Operator I (\$945-\$1,162)—Computing Services
Dental Technician I (\$945-\$1,162)—Dental Clinical Sciences
Technician I (Part time) (\$455-\$557.50)—Geology (Term)
Technician I (Trust) (\$949-\$1,162)—Medicine
Biochemistry Technician I (Trust) (\$949-\$1,162)—Pharmacology (Term)
Audio Visual Technician I/II (Trust) (\$949-\$1,318)—Legal Resource Centre
Audio and Video Technician I/II (\$985-\$1,377)—Radio and Television
Storeman III (\$1,026-\$1,264)—Pathology
Security Officer I (three positions) (\$1,026-\$1,264)—Campus Security
Technician II (\$1,026-\$1,264)—Mineral Engineering
Laboratory Technologist I (\$1,026-\$1,264)—Mineral Engineering
Technician II (\$1,026-\$1,264)—Oral Biology
Technologist I (Trust) (\$1,070-\$1,318)—Surgery
Bacteriology Technologist I (\$1,070-\$1,318)—Medical Bacteriology (Trust, Term)
Electronics Technician II/III (Trust) (\$1,116-\$1,565)—Physics
Accounting Assistant (\$1,162-\$1,439)—Internal Audit
Civil Engineering Technician III (\$1,162-\$1,439)—Civil Engineering
Technologist II (\$1,162-\$1,439)—Home Economics
Research and Planning Analyst IV (\$1,162-\$1,439)—Institutional Research and Planning (Term)
Machinist Technician II/III (\$1,162-\$1,638)—Physics
Electronics Technician III (\$1,212-\$1,501)—Physics (2 positions); Psychology
Programmer/Analyst II (\$1,212-\$1,501)—Forest Science; Administrative Systems; Educational Research Services
Typographical Tradesman III/IV (\$1,212-\$1,569)—Printing Services
Technologist III (\$1,320-\$1,638)—Mineral Engineering
Interior Designer II (\$1,377-\$1,711)—Purchasing
Audio and Video Technician IV (\$1,439-\$1,789)—Radio and Television
Engineering Technologist V (\$1,638-\$2,044)—Physical Plant
Programmer/Analyst IV (\$1,711-\$2,140)—Administrative Systems

The following is a list of currently available positions in the University of Alberta Libraries. The bulletin board in the Cameron Library, Room 512, should be consulted for further information as to availability and position requirements.

Library Clerk II (\$707-\$844)—Cataloguing

Advertisements

must reach the Editor on the Thursday prior to publication, which date also serves as the deadline for cancellation of advertisements. The cost of placing advertisements is 20 cents per word for the first week and 10 cents per word for subsequent weeks ordered before the next deadline. Advertisements must be paid for in advance, and are accepted at the discretion of the Editor. We regret that no advertisements can be taken over the telephone. For order forms or further information, telephone 432-2325.

Accommodations available

For sale—Elegant townhouse, Ermineskin. Three bedroom home offers 1,966 sq. ft. living space. Log burning fireplace. Double garage. Southern exposure. End unit. \$112,000. Potter Realty. Joyce Byrne 436-3050, 435-6064.

For sale—Executive townhouse living in Ermineskin. 1,966 sq. ft., fireplace, double attached garage. Call Lesia Demers at 465-0111 or 437-0547. The Permanent. Canada Permanent Trust Realtor.

For sale—By owner. Custom built house 2,050 sq. ft. Four bedrooms, family room, fireplace, wood panelling bookcases. Double attached garage, vacuum system. Three bathrooms, landscaped. Castle Downs, five blocks from Beaumaris Lake. 456-7004 after 4 p.m.

For sale—House. 109 St. - 88 Ave. 1,400 sq. ft., three bathrooms, nine rooms. \$95,000. 483-7342 evenings.

For rent—Luxury Riverbend townhouse, Hearthstone. Three bedrooms, 1½ baths. Furnished. Five appliances. Available January - July, 1980. \$550 monthly. 436-7562.

For sale—By owner. Luxury townhouse on southside, 1,700 sq. ft. with attached garage. Large assumable 10½% mortgage priced below market for quick sale. \$83,500. 435-3020.

For rent—Spacious, furnished, three-bedroom bungalow in Greenfields (36 Ave. and 118 St.). Available January to July, 1980. Excellent schools, active community, convenient services. 435-2398, 452-3042.

For rent—Three bedroom townhouse in west end (Callingwood II). 1½ baths, four appliances, curtains and drapes, carpet. Phone 437-3653 evenings.

For sale—Petrolia. Three bedroom home close to schools and shopping. Fireplace in completely developed lower level. Double garage. Fenced and landscaped. Immediate possession. Good value at \$99,500. Faye Lund. Block Bros. Realty. 436-4240, 487-2422.

For sale—Westend. Exceptionally well kept split level. All fenced, landscaped and developed. Double garage, fireplace. Quiet residential area, well hidden but worth finding! Immediate possession. Price \$112,900 well worth it. Faye Lund. Block Bros. Realty. 436-4240, 487-2422.

For sale—Older spacious immaculate bungalow, 1,300 sq. ft. in Martin

Estates. Large park-like yard with its own green house. All appliances including deep freeze. Two, four piece baths. Basement completely developed. Pleasure to view. Call Gloria. Block Bros. Realty. 436-4240, 489-4156.

Priced to sell: River valley view from this bright two-bedroom condominium in Westwind. Must be sold! Call Barbara Allen 434-0729, Pat von Borstel 437-6540. Spencer Real Estate, 436-5250.

For sale—Bungalow in Windsor Park at 8932 116 St. \$127,000. For appointment call 439-4207.

For sale by owner—2 x 100 acres divided by country road. Natural ski slopes; excellent for country lodge. Beautiful view to Pembina Valley. Not good for farming. \$200,000. Cash only. 433-0629, 727-2483.

For rent—Large three-bedroom apartment, own entrance, new four-plex, for family or small group. Appliances, some utilities included. Central, quiet location, 14615 103 Avenue. Phone 458-8478.

For rent—Shared house, board. Female preferred. 422-2255, 455-7223.

For sale—New bungalow 8711 29 Avenue. Three bedrooms, 1½ baths, dining room, large kitchen, fireplace, close to amenities. 462-2495.

For sale—Charming three-bedroom bungalow, Belgravia. Fireplace. Developed basement. Well priced. \$82,900. Alice. 433-7207.

For sale—Five-bedroom, semi-bungalow. Hardwood floors. Gracious trees. Near University. Must be sold. \$65,900. Alice 433-7207.

For sale—Gracious, spacious, 1,725 sq. ft. bungalow. Double front drive garage in Riverbend. Secluded crescent location. Park like landscaping. Family room with fireplace on main floor. Master bedroom has three piece bath. A rare find! Call Faye Lund. Block Bros. Realty 436-4240, 487-2422.

For sale—Belgravia. New executive 2,000 sq. ft., two storey, loaded with luxuries. Choice of carpets and fixtures still available. Drastically reduced for quick sale. Call Goetz 439-0035, 436-1134.

For sale—Well treed Devon acreage with 2,000 sq. ft., unique open beam, two storey on 5 acres. Features 22' ceiling, fireplace, family room, library, lofts, asking \$142,900. \$90,000 mortgage. Ken 439-0035, 462-3447 Crescent Realty.

For sale—Garneau. High density residential investment property. \$25.71 per sq. ft. (\$224,000 total) for October only. Charles Sauer, 436-4844. Oak Point Realty.

For sale—Groat Estate-Inglewood. By owner. Large 2½ storey, older home substantially renovated, retaining original character, excellent condition. Developed basement, winterized sun porch, hardwood floors, open fireplace. Asking \$135,000. Phone 452-2433, 432-5538.

For sale—Belgravia. Three bedroom bungalow, 1,340 sq. ft., large treed

lot, spacious kitchen, fireplace, 1½ bathrooms. Basement: L shaped rumpus room, laundry room, one bedroom, one study-library room. Five appliances, heated double garage. By owner, must sell. \$119,000. Phone 436-4505 or 432-3784.

For sale—Windsor Park. Three bedroom bungalow, three car garage. Basement area includes: separate entrance, wood finished and hardwood floors in recreation and large bedroom, bathroom, loads of built-in storage. \$160,000. For appointment phone 433-3543.

For sale—Three-bedroom, executive home in Malmo. Bedroom, rumpus room and bar in basement. Many extras. Good financing. Phone 435-6722.

For sale—Impressive Tudor. Spacious nine room newer home. Old brick, dormers, bay windows, terrific coordinated decor. Southwest location. Call Liz Crockford, Spencer Real Estate. 436-5250, 434-0555 res.

Accommodations wanted

Needed to rent—Heated and insulated garage. 988-8549.

Postdoctoral Fellow and family (2 children), require furnished two-bedroom apartment/house. 1 November 1979 to 30 April 1980. Contact Dr. Yoshimasa Uehara through Dr. A.R.P. Paterson, Cancer Research Unit (McEachern Laboratory.) 432-3541.

Automobiles and others

Wanted older Datsun 510 or other Japanese car, working or not. 477-2908.

1977 Cougar XR7. Blue with silver trim. Fully loaded. \$6,200. 481-0501.

1970 Alfa Romeo Giulia Super. Excellent condition. No rust. 432-5659 days, 452-6332 evenings.

Goods and services

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Edmonton Yoseikan Karate Club: Call Sport Alberta 458-0440.

Babies wanted—Three to nine months old. Volunteers needed for short observations of early learning, at home or in lab. Dr. Cornell. 432-5216. Typing on Word Processor. Call Darlene 987-2989, 452-1074.

Professional typing. 464-4887. Wanted old color portable TVs. Call 477-2908.

Woodworking and interior renovations. Small or large jobs. Fine craftsmanship. 988-8549.

Painting—Interiors. Neat and reasonable. 988-8549.

Lowrey organ for sale. Excellent. 432-3308, 483-6094.

Out of Print book search. We also buy, sell, evaluate. Tom Williams Books, Box 4126C, Calgary.

Will do accurate typing. Phone 422-7975 evenings, 482-7551 days. Typist will do accurate, neat typing at home. \$1/page. 435-0404.

High quality electronic piano for sale. \$1,200 firm. Full 88 notes. Touch and tone superior to Fender selling downtown for \$2,275. 432-3796 Dean 436-1879.

Experienced piano teacher, all levels. Phone 489-8059.

T.V. 12" Sears B/W, AC/DC. Top of line model, hardly used, two years old. \$85. 432-5093.

For sale—Step by step complete self-study Russian course adapted from Potapova's on tape with accompanying manual and "Sony" tape recorder and play-back (reel to reel) as new. 432-1568.

Beautiful, healthy house plants. More than 20 varieties. Reasonably priced. Phone 435-6037.

For sale—20" black and white television. Table and four chairs. Phone 468-2174.

Children's Books: patio sale, hardcover nearly new samples. \$1 to \$3. Saturday 13 October, 10 to 4 p.m. 8340 120 Street.

Typing service—Experienced. \$1 per page. Jan: Office 428-3644 (8:30 a.m.-4:30 p.m.) Home 469-9748. Specializing in theses and term papers.

Wanted—½ size and full size violin. 433-3895.

Expert typing—theses, etc. 452-1734.

Organizing group for two month trip across Soviet Union. (Approximately 7 May-8 July 1980). For more information contact Alex 429-0116.

"Green Circle Preschool," a parent cooperative for children 3 - 5 years now has openings for the 1979-80 term. Exceptional preschool teacher. Excellent facilities. Located in McKernan Elementary School at 114 St. and 76 Ave. Enquiries to Fern Zurawell 434-6249. Rita Spencer 435-7129.

Estate sale of household contents, predominantly living room, dining room and kitchen items. Reasonable prices. 432-7869.

Refinished Schubert (Mason & Risch) piano, excellent condition, twenty years old, \$1,500 or best offer. 432-7869.

Lovely orange/white kitten. Look for good home. Call 435-8204 evenings.

Christmas craft sale. Interested vendors phone 466-1995 or 998-1730.

Wanted participants for study of children's TV watching behavior (5-11 years). Phone Dr. J. Bishop at 432-5478 for further information. For sale —Teak dining table and six chairs. \$360. 439-2948.

Craft sale—Pottery, stained glass, enamel, weaving, sculpture, etchings, watercolors, macramé, toys, silver jewelry. 5415-114 B St. 434-7043. 9:30 a.m. to 5 p.m. Saturday, 27 October.

Experienced French/English tutor. 452-5485.

Storage space on rural acreage for trailer, etc. 477-2908.

Babysitter wanted near University, afternoons, Monday - Friday. \$3/hour. Call 432-0806 after 5 p.m.

Experienced typist available. 462-3934. Stereo, TV combination. Partly working order. \$35. 452-5485.

10316-111 St., EDMONTON, tel. 428-8291, closed Mondays.

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Date: 30-31 October 1979

Place: C.A.B.

Time: 9 a.m.-4 p.m.

For further information:

Wendy Kinsey
Room 823
General Services Building
Telephone: 432-2680
432-52101



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